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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,961	02/12/2002	Yoshiaki Moriyama	Q68491	2264

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EXAMINER	
EDWARDS, PATRICK L	
ART UNIT	**PAPER NUMBER**
2621	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,961	MORIYAMA, YOSHIAKI	
	Examiner	Art Unit	
	Patrick L. Edwards	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09-17-2004*. 2-13-05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. Claims 17-24 are drawn to non-functional descriptive material. MPEP 2106.IV.B.1(a) (Nonfunctional Descriptive Material) states:

> Descriptive material that cannot exhibit any functional interrelationship with the way in which computing processes are performed does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 USC 101. Where certain types of descriptive material, such as music, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing process performed by the computer, then such descriptive material alone does not impart functionalty either to the data as so structured, or to the computer. For example, music is commonly sold to consumers in the form of a compact disc. In such cases, the compact disc acts as nothing more than a carrier for nonfunctional descriptive material. The purely nonfunctional descriptive material cannot alone provide the practical application for the manufacture

2. MPEP 2106.IV.B.1 (Nonstatutory Subject Matter) states:

> When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement.

3. Claim 17 currently recites a recording medium having an embedded digital watermark. There is no functional relationship imparted by this data to a computing device. Therefore, the claim is drawn to non-functional descriptive material which is non-statutory per se.

Claims 18-24 are rejected for the same reasons.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-4, 7, 10-12, 15, 18-20, and 23 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2 as an exemplary claim, the metes and bounds of this claim are unclear because the claim recites a comparison (i.e. a difference that is greater) between two quantities that cannot be compared. Specifically, the claim recites comparing a physical/spatial quantity (difference between end position of watermark and end position of contents) and a time quantity (the delay in detecting). This is a non sequitur. For instance, a shoemaker would not compare the the length or width of his Shoemaker's Bench (see U.S. Pat. No. 1678 ½ X) with the time it takes to make a pair of shoes.

This aspect of the claim could be made definite if the the position and the delay had some sort of common denominator (e.g. if they were both defined in terms of bits). In the currently recited claims, the time comparison is out of context, and the limitation is therefore indefinite.

For purposes of further examination, this claim limitation will be interpreted as reciting that the watermark size is less than or equal to the difference between a determined position and the end of the digital content. This interpretation appears to be consistent with the specification.

Claims 4, 7, 10, 12, 15, 18, 20, and 23 are indefinite for the same reasons.

Regarding claim 3, the metes and bounds of this claim are not clear because it is not possible to embed a digital watermark in digital data that has not yet started. Specifically, the claim recites contents comprising digital data, and then determines a position before the the starting point of the contents. But then what comes before the digital contents? The claim only recites a single digital contents, so it is unclear what—if anything—exists prior to this "starting position". It follows that it is unclear how a position is determined and/or how a watermark can be embedded in such an undefined area.

Claims 4, 11, 12, 19, and 20 are indefinite for the same reasons.

Regarding claim 5 specifically, the metes and bounds of this claim are unclear because this claim is internally inconsistent and presents an impossible situation.

The first limitation of the claim recites "determining a position before a change position of adjacent contents." Since this claim is finding a "determined position" before the starting position of the adjacent contents, this "determined position" is located in the current contents.

The second limitation of the claim recites setting a digital watermark change position "in said adjacent contents at said determined position." This requires the "determined position" to be located in the adjacent contents. But this first limitation excludes such an arrangement. Accordingly, these limitations cannot be reconciled and the claim is inconsistent.

The indefiniteness of claim 5 trickles down to claims 6 and 7 and creates additional difficulties. These claims are likewise rejected. A further analysis of the indefiniteness of claims 6 and 7 will be omitted on the assumption that a clarification amendment to claim 5 will unmuddy the opaque waters of claims 6 and 7.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-4, 9-12, 16-20, and 24 are rejected under 35 U.S.C. 102b as being anticipated by Powell et al (USPN 5,721,788).

Regarding independent claim 1, Powell discloses the following steps in a digital watermark embedding method:

- determining a position before an end of a digital data content (Powell col. 4 lines 40-45: The reference describes determining the edges/borders of an image, and then determining a position 10% before the edge/border of the image. The border/edge of an image qualifies as the "end" of digital data content.).
- setting an end position of an embedded digital watermark in said contents at said determined position (Powell col. 4 lines 40-45: The reference describes setting signature points (i.e. digital watermarks) at a point not within this 10% region. The signature points are used up to this 10% region, and thus the "end position" of the digital watermark coincides with this determined "end position" of the digital content.).

Regarding independent claim 3, Powell discloses the following steps in a digital watermark embedding method:

- determining a position before a starting point of said contents (Powell col. 4 lines 40-45: The reference describes determining the edges/borders of an image, and then determining a position 10% before the edge/border of the image. The border/edge of an image qualifies as the "start" of digital data content.).
- setting a starting position of said embedded digital watermark in said contents at said determined position (Powell col. 4 lines 40-45: The reference describes setting signature points (i.e. digital watermarks) at a point not within this 10% region. The signature points are used up to this 10% region, and thus the "start position" of the digital watermark coincides with this determined "start position" of the digital content.).

Regarding claims 2 and 4, the interpretation set forth in the above 112(2) rejection is incorporated herein. Powell discloses a 16 bit signature (i.e. digital watermark). This is smaller than 10% of the image itself (see Powell col. 3 lines 29-34).

Regarding claim 8, Powell discloses that the digital watermark is data indicating that copying of said contents is prohibited (powell col. 1 lines 19-21: The reference describes embedding an identifying signature onto the document. This is done for the purpose of limiting access or use of the image (i.e. indicating that copying is prohibited).).

Regarding claims 9-12, 16-20, and 24, Powell discloses an apparatus and recording medium for performing the method of the above claims (see powell, Figure 1).

8. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Rhoads (U.S. Pat. No. 6,311,214).

Regarding independent claim 5, Rhoads discloses a watermark embedding method in an environment of a plurality of continuous digital data contents (see Rhoads, generally). In this environment Rhoads discloses the following:

- determining a position before a change position of adjacent contents (Rhoads col. 43 lines 1-25: The reference describes a data payload with with a change position of adjacent contents (col. 43 line 5: The "A" and "I" sections are both change positions since this payload is repeated (see col. 43 lines 24-26).). Rhoads determines a position before this change position (i.e. part "G" of the payload).).
- setting a change position of said digital watermarks in said adjacent contents at said determined position (Rhoads col. 43 lines 1-25: The reference describes setting a "usage control string" (i.e. a digital watermark) at this determined position.).

Regarding claim 6, Rhoads discloses the following:

- the claim according to claim 5 wherein in the case that out of a plurality of continuous contents, copying is allowed for previous contents, the setting process sets a starting position of said embedded digital watermark in following contents that follow the previous contents, at a starting point of the following contents (Rhoads col. 52 lines 1-46: The reference describes that in a situation where copying is allowed for previous contents (i.e. the usage is "copy once"), that the watermark in the next (adjacent) contents is set at the starting point (col. 52 lines 43-46: The recording device checks firsts for this "copy never" bit. Thus, this "copy never" bit (i.e. digital watermark) is the "starting point" of the adjacent contents.))

Regarding claim 7, Rhoads discloses that the difference between the watermark and adjacent contents is greater than the watermark itself (Rhoads col. 43 lines 1-23).

Regarding claims 13-15 and 21-23, Rhoads discloses an apparatus and recording medium for performing the method (see Rhoads, generally).

Regarding claims 1-4, 8-12, 16-20, and 24, the above analysis is incorporated herein, and Rhoads discloses anticipates these claims under the same analysis.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Mitsui et al. (USPN 6,802,074) this is a US equivalent of an IDS document.
- Ryan (USPN 6,374,036) teaches a "copy once" method for continuous data (video) watermarking.
- Schwab et al. (USPN 5,134,496) teaches inserting leading and trail code sequences into video for copyright protection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L. Edwards whose telephone number is (571) 272-7390. The examiner can normally be reached on 8:30am - 5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick L. Edwards Art Unit 2621

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ANDREW W. JOHNS
PRIMARY EXAMINER